



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,911	02/20/2004	Seigo Nishikawa	Q79997	5337

23373 7590 08/24/2005

SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

SHAW, CLIFFORD C

ART UNIT	PAPER NUMBER
----------	--------------

1725

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/781,911

Applicant(s)

NISHIKAWA ET AL.

Examiner

Clifford C. Shaw

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0220</u> . | 6) <input type="checkbox"/> Other: ____ |

Detailed Action

1.) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2.) Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terayama et al. (5,645,741) taken with Stava (5,148,001). Figure 3 and the discussion at column 8, line 37 through column 9, line 20 disclose an arc welder with features claimed, including: a rectifier circuit DR1; an inverter circuit TR1; transformer T1; a second rectifier circuit DR2; a first reactor LD1; a current circuit comprised of a third rectifier circuit DR4; a reactance LD2 connecting the current circuit in parallel with the second rectifier circuit. The claims differ from Terayama et al. (5,645,741) in specifying that the reactance associated with the current circuit has a larger reactance than the claimed first reactor and further in specifying particular inductance values in claim 2 for these reactors. This difference does not patentably distinguish over the prior art. Although the patent to Terayama et al. (5,645,741) does not explicitly discuss the values of the two reactors LD2 and LD1 (it does hint that LD2 is greater than LD1 by schematically showing more windings for LD2 than LD1 in the circuit diagram), it is considered obvious that the reactor LD2 has a larger inductance than LD1 on the basis of the functions they perform. The inductance LD2 is intended to maintain the arc during interruptions, much as applicant's current circuit reactor does, while the inductance LD1 is in the main current branch

Art Unit: 1725

of a constant voltage system (see the graph in figure 2). Since a relatively high inductance is useful for maintaining an arc and a high inductance would not be useful in a constant voltage system, it is considered obvious that the inductance LD2 is greater than the inductance of LD1. Further support for this position is found in Stava (5,148,001). The patent to Stava (5,148,001) discusses two parallel supplies, one a main welding supply, the other a background current supply, broadly similar to the situation of the Terayama et al. (5,645,741) system. The supplies in Stava (5,148,001) use two inductances as does the figure 3 system of Terayama et al. (5,645,741). At column 5, lines 30-35, the patent to Stava (5,148,001) discusses the relationship of the inductances, and teaches that the main welding circuit should have a lower inductance than the background circuit. It would have been obvious to have configured the inductances in Terayama et al. (5,645,741) in the manner taught by Stava (5,148,001) to secure the advantages of this arrangement, thereby satisfying the limitation in claim 1. In regard to the particular inductance values of claim 2, the same are considered representative of routine engineering choices. It would have been obvious to have chosen these values for the system of Terayama et al. (5,645,741), depending on the specifics of a particular welding job, thereby satisfying the claim.

Any inquiry concerning this communication should be directed to Clifford C Shaw at telephone number 571-272-1182. The examiner can normally be reached on Monday through

Art Unit: 1725

Friday of the first week of the pay period and on Tuesday through Friday of the second week of the pay period.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas G. Dunn, can be reached at 571-272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Clifford C Shaw
Primary Examiner
Art Unit 1725

August 22, 2005